Post Design-Build Evaluation Report

Project Description: Courtland Street Accelerated Bridge Construction Project

P.I. Number: 752015- 
County: Fulton 
GDOT District: District 7

Date Conducted: December 4, 2018
1. **Project Description:** The project included the construction necessary to replace the Courtland Street Bridge between Martin Luther King Jr. Drive and Gilmer Street. The Courtland Street Bridge over MARTA, CSX, and Decatur Street was 1,077 feet long and had 28 spans with a maximum span length of 84 feet. The bridge was 60 feet out to out and 45 feet gutter to gutter. The project replaced the bridge structure entirely due to the deteriorating conditions of the bridge. The bridge dimensions and vertical profile remained the same. The span at CSX will be increased to allow for a third track.

2. **Design-Build delivery goal(s):** Expedited delivery of a bridge in a congested area over the railroad and MARTA. Accelerated Bridge Construction (ABC) including accepted Alternative Technical Concepts (ATCs) from the DB Team, allowed for the minimization of the closure duration of the bridge.

3. **Project stakeholders:**
   - GDOT – Innovative Delivery, District 7, Environmental Services, Bridge Design, State Utilities
   - C.W. Matthews Contracting Co. – Prime Contractor
   - Michael Baker International – Prime Designer/Engineer of Record
   - City of Atlanta
   - MARTA
   - CSX Transportation
   - FHWA
   - Georgia State University
   - Georgia Building Authority

4. **Project Summary:**

<table>
<thead>
<tr>
<th>Project Milestone</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Let</td>
<td></td>
</tr>
<tr>
<td>Public Notice Advertisement (PNA)</td>
<td>11/18/2016</td>
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<tr>
<td>Request for Qualifications (RFQ)</td>
<td>01/25/2017</td>
</tr>
<tr>
<td>Letter of Interest (LOI)/Statement of Qualifications (SOQ)</td>
<td>02/24/2017</td>
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<tr>
<td>Notice to Finalists</td>
<td>03/10/2017</td>
</tr>
<tr>
<td>Request for Proposals (RFP)</td>
<td>03/24/2017</td>
</tr>
<tr>
<td>Administrative Package Due</td>
<td>06/23/2017</td>
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<tr>
<td>Technical Package Due</td>
<td>06/23/2017</td>
</tr>
<tr>
<td>Price Proposal / Project Letting</td>
<td>07/21/2017</td>
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<tr>
<td>Post-Let</td>
<td></td>
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<tr>
<td>Project Award</td>
<td>08/04/2017</td>
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<tr>
<td>NTP1 – Preliminary Design</td>
<td>09/07/2017</td>
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<tr>
<td>NTP2 – Final Design Activities</td>
<td>09/07/2017</td>
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<tr>
<td>Conditional NTP 3 – Construction Phase</td>
<td>12/21/2017</td>
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<tr>
<td>Milestone Deadline – New Bridge Open to Traffic</td>
<td>10/07/2018</td>
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<td>Contract Completion Date</td>
<td>04/24/2019</td>
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<td>Substantial Project Completion</td>
<td>11/02/2018</td>
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5. **Design-Build Proposers:**

<table>
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<tr>
<th></th>
<th>Contractor</th>
<th>Designer</th>
<th>Total Bid</th>
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<tr>
<td>1</td>
<td>C.W. Matthews Contracting Co.</td>
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<td>$21,068,491.58</td>
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<td>2</td>
<td>Brasfield &amp; Gorrie</td>
<td>Neel-Schaffer</td>
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<td>3</td>
<td>Superior Construction Co.</td>
<td>Infrastructure Consulting &amp; Engineering</td>
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<td>4</td>
<td>Archer Western Contractors</td>
<td>Heath &amp; Lineback Engineers, Inc.</td>
<td>$22,521,500.00</td>
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6. **Stipend**
   a. Was a stipend (stipulated fee) offered to proposing Design-Build Teams?  ☑ Yes  ☐ No
      If yes, how much per firm: $100,000

7. **Design-Build Request for Proposals (RFP)**
   a. Type of procurement: ☐ One Phase/Low Bid  ☑ Two Phase/Low Bid  ☑ Best Value
      **Note:** Six Design-Build Teams submitted LOI/SOQ packages in response to the RFQ and four were notified to be finalists. On June 23, 2017 the Department received four price proposals and corresponding technical proposals.
   b. Advertisement duration: ☐ 30 days  ☐ 60 days  ☐ 90 days  ☑ 90 days +
   c. Was a draft RFP released for this project? ☐ Yes  ☑ No
      If yes # of releases: N/A
      Was a Q&A format provided?  ☑ Yes  ☐ No
   d. Were One-on-One meetings held with proposers? ☑ Yes  ☐ No
   e. List GDOT offices involved in the RFP development: Design Policy & Support, Engineering Services, Environmental Services, Innovative Delivery, Utilities, Construction, Bridge, District 7, Traffic Operations

8. **Design-Build RFP Package**
   a. List items included in the RFP package:

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<tr>
<th>Item</th>
<th>Yes</th>
<th>No</th>
<th>Notes</th>
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<tr>
<td>DBB Reference Drawings</td>
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<tr>
<td>Approved Existing BFI</td>
<td>X</td>
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<td>Approved Concept Report</td>
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<td>Design Criteria</td>
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<td>Approved Design Variance</td>
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<td>Drainage &amp; Erosion Plans</td>
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<td>Environmental Working Document</td>
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<td>Final Field Plan Review Documents</td>
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<td>Geometry (CAiCE &amp; InRoads)</td>
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<td>Approved Pavement Design</td>
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<td>Railroad Coordination Information</td>
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<td>Value Engineering Study</td>
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<tr>
<td>Approved Courtland Street Detour Map</td>
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</table>
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b. General observations of the RFP contents and/or procurement process:
   o Design-Build Team noted that inclusion of the existing BFI was helpful
   o Design Team noted that the survey control package was based on local survey datum and was not on the state plane, which increased the challenge while completing design.
   o Design-Build Team questioned the need for the 4D model, as it did not benefit the construction techniques used. OID used this project as a test/pilot project for the use of 4D modeling, due to 1) the close proximity of the surrounding infrastructure and 2) the potential for increased public outreach on the project.
   o Design Team noted the abutment wall as a shift of risk that may not have been appropriate. GDOT to consider being more clear on these type requirements.

c. Were conflicts in project scope identified: ☐ Yes ☒ No
   If yes, what sections should be revised for future RFPs:

9. Environmental
   a. Type of document: ☒ NEPA: Level: ☐ PCE ☒ CE ☐ EA/FONSI ☐ EIS/ROD ☐ GEPA: Level: ☐ Type A ☐ Type B ☐ EER/NOD
   b. Was the environmental document approved prior to the RFP advertisement? ☐ Yes ☒ No
      If no, when was the NEPA/GEPA document approved?
   c. Was a re-evaluation performed post-let? ☐ Yes ☒ No
      If yes, describe scenario why a re-evaluation was required:
      If yes, did the Design-Build Team perform the re-evaluation? ☐ Yes ☐ No
      Did the Design-Build Team provide supporting documentation? ☐ Yes ☒ No
   d. General observations of the pre-let or post-let environmental process:
      i. Archeological monitoring had the potential to significantly delay the project, but was not stipulated in the contract sufficiently. No significant artifacts were found during construction.

10. Environmental Permitting
   a. Type of 404 permit required: ☒ NWP ☐ IP ☐ Other ☒ None
   b. Was mitigation required as part of the permit? ☐ Yes ☒ No
      If yes, did the Design-Build Team perform mitigation and/or acquire credits? ☐ Yes ☒ No
   c. Was a Stream Buffer Variance (SBV) required? ☒ Yes ☐ No
d. List any other permits required by the project (not counting NPDES Permit): None

e. General observations of the environmental permitting process: None

11. NPDES Permit

a. Did the Design-Build Team prepare the Notice of Intent (NOI)? □ Yes □ No □ NA
b. Did the Design-Build Team pay the NPDES permitting fee? □ Yes □ No □ NA
c. Were the ESPCP regularly redlined? □ Yes □ No □ NA
d. Did any self-report actions occur? □ Yes □ No
   If yes, describe the reason(s) and outcome(s):

e. Was a consent order filed? □ Yes □ No
   If yes, describe the reason(s) and outcome(s):

f. Additional comments:

12. Right of Way (R/W)

a. Was R/W required? □ Yes □ No
   If yes, who was responsible for R/W? □ GDOT □ Locals □ Design-Build Team (City of Atlanta)
   If yes, was it acquired prior to award of the Design-Build contract? □ Yes □ No
   If yes, did R/W acquisition activities impact the project schedule? □ Yes □ No
b. How were R/W commitments or cost-to-cure elements handled on this project:
   o Any commitments related to the acquisition of the R/W were included in Volume 2 of the RFP.

c. List any special circumstances, conditions, or property owner commitments of R/W acquisition:
   o All special circumstances, conditions, and property owner commitments were detailed in Volume 2 of the RFP.

d. General observations of the R/W acquisition process:
   o Focused coordination between the City of Atlanta and GSU with the assistance of GDOT – and the PMC - was needed to ensure acquisitions didn’t impact the project schedule.
   o Many of the cost-to-cure items ended up behind schedule. DB Team successfully managed these cost-to-cure items, and property owners were helpful in coordinating with the contractor, but this could have delayed the project if not managed correctly.

13. Utilities

a. Was SUE performed pre-let and included in the RFP package? □ Yes □ No
   If yes, what level? □ QL-D □ QL-C □ QL-B □ QL-A
   If No, what was the mitigating activity (e.g. white lining specification, “no-conflict” letters, first submission plans):

b. Were Design-Build Utility MOU’s executed? □ Yes □ No

c. List the utility owners, if any, which were included in the Design-Build contract: Atlanta Gas Light Company, AT&T DBA Bellsouth, CenturyLink Communications LLC, City of Atlanta – Watershed, Comcast, Crown Castle, Georgia Power Distribution, Georgia Power Network, Level 3 Communication, MCI Metro Access Transmission Services LLC, Southern Telecom Inc, Tower Cloud, Zayo Fiber

d. Generally describe observations with respect to Design-Build utility coordination:
   o There were a large number of utilities in the area, which required much early coordination to minimize impacts to the project schedule.
o Contractor noted the use of SUE QL-A as being extremely helpful in finalizing their design and preparing their bid.

o Note that CSX was also in the corridor, and DB Team was able to successfully manage their reviews.

e. Generally describe any areas of improvement with respect to Design-Build utility coordination:

o Utility coordination experienced very few issues, resulting in utilities being moved on time and in a very efficient manner.

o Contractor excavated foundations delicately upfront where utilities were present to uncover and inspect the state of certain utilities to determine a course of action. GDOT & Utility owners both noted this as a success for the project.

o City of Atlanta permitted a new utility to install new facilities within the project limits during the construction period, without advance notice to contractor. Ensure permitting agency notifies contractor in the area prior to permitting utility work.

f. What was the frequency of utility coordination meetings?

o Monthly during design.

14. Geotechnical

a. Was an approved Soils Report included in the RFP package? ☒ Yes ☐ No

If no, was a Soils Report required for the project? ☐ Yes ☒ No

b. Was an approved BFI included in the RFP package? ☐ Yes ☒ No

If no, was a BFI required for this project? ☒ Yes ☐ No

c. Was an approved WFI included in the RFP package? ☒ Yes ☐ No

If no, was a WFI required for this project? ☐ Yes ☒ No

b. Was an approved High Mast Foundation Investigation report included in the RFP package? ☐ Yes ☒ No

If no, was a HMFI required for this project? ☒ Yes ☐ No

e. Were there any geotechnical issues encountered on construction? ☐ Yes ☒ No

If yes, describe issues and outcome:

o Existing subsurface void area was discovered under Gilmer Street

15. Design and Construction Phases

a. Did the Design-Build Team advance portions of the project to the construction phase while other portions of the project continued to be designed and/or permits obtained? ☐ Yes ☒ No

If yes, describe: Conditional NTP 3a was issued for erosion control, MOT, and the construction of several bridge foundations. Conditional NTP 3b was issued for bridge beam fabrication. Conditional NTP 3c was issued for utility relocations. Conditional NTP 3d was issued for Area 1 substructure construction. Conditional NTP 3e was issued for limited Foundation and Substructure construction. NTP 3 for all remaining construction activities was issued on May 1, 2018.

b. Describe the typical frequency for progress meetings? Bi-weekly.

c. Were the Design-Build Team plans/submittals of acceptable quality? ☐ Yes ☒ No

If no, describe issue and any corrective actions taken:
d. Were GDOT’s review times adequate? ☒ Yes ☐ No  
   If no, describe:  
   General observations of review times:  

 e. Was the Asphalt Index specification included in this project? ☐ Yes ☒ No  

 f. Was the Fuel Index specification included in this project? ☐ Yes ☒ No  

 g. Was construction the Maintenance of Traffic (MOT) acceptable? ☒ Yes ☐ No  
   If no, describe:  

 h. Was the Schedule of Values adequate? ☒ Yes ☐ No  
   If no, describe:  

 i. Was the pay voucher and overall payment process acceptable? ☒ Yes ☐ No  
   If no, describe:  

 j. Was the Critical Path Method (CPM) schedule specification used on this project? ☒ Yes ☐ No  
   If yes, describe general experiences (pro or con) using the CPM specification:  
   o Contractor noted this project as specifically needing a CPM spec, and appreciated its inclusion.  
   If yes, any suggested improvements to the use of CPM schedule:  

 k. Were there any unique issues (to Design-Build) that occurred? ☒ Yes ☐ No  
   If yes, describe:  
   o Design-Build team submitted - and GDOT accepted - bridge foundation plans initially without a completed superstructure design in order to expedite schedule.  
   o Design-Build Team construction approach – constructing the bridge in two phases longitudinally – was seen as a unique approach which again allowed for a reduced schedule.  
   o Design-Build Team approached quick review times, and collaborative reviews from GDOT Bridge Office.  
   o Micropiles used in the foundation allowed the substructure bridge work to begin while traffic was still using the existing bridge.  

 l. Were sound barriers required on this project? ☒ Yes ☐ No  
   If yes, describe the material/color:  
   If yes, was the sound barrier material/color specified in the contract? ☐ Yes ☒ No  
   If yes, was the sound barrier height/location specified in the contract? ☒ Yes ☐ No  

 m. Were there lane closure restrictions on this project? ☒ Yes ☐ No  
   If yes, were they adequate or could they have been modified for efficiency:  
   o Restrictions were adequate  

 n. Were there ITS outage restrictions on this project? ☐ Yes ☒ No ☒ NA  
   If yes, were they adequate or could they have been modified for efficiency:  

 o. Were there new or existing Traffic Signal modifications required? ☐ Yes ☒ No  
   If yes, were the traffic signal permits obtained by GDOT? ☒ Yes ☐ No  

 p. Were As-built plans prepared by the Design-Build Team? ☐ Yes ☒ No ☒ Pending  

16. Design-Build Innovations  
   a. Were there innovative designs, solutions or materials used on this project? ☒ Yes ☐ No  
      If yes, describe:  
      o Galvanized Steel Intermediate Diaphragms where vertical clearance is less that 20’
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- Integrated Concrete – Steel Edge beams
- Uplift capacity of micropiles
- Type III Cement Concrete Mix Designs
- Design Team submitted bridge & roadway plans in phases
- Communication outreach & stakeholder involvement was above minimum RFP requirements

b. Were any Value Engineering Proposals (VEP) submitted? ☐ Yes ☒ No

If yes, fill out the below information:

<table>
<thead>
<tr>
<th>No.</th>
<th>VECP Description</th>
<th>Total Savings</th>
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<tbody>
<tr>
<td>1</td>
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<td>$</td>
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e. List other benefits that are not reflected in the cost savings:

17. Supplemental Agreement Summary

<table>
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<tr>
<th>SA No.</th>
<th>Amount</th>
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<tbody>
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<td>1</td>
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<td>UST Removal</td>
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<td>2</td>
<td>$12,122.99</td>
<td>Phase II Soil Removal/Revised Green Sheet</td>
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<td>3</td>
<td>$0</td>
<td>Revised EEO Federal Provisions</td>
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<tr>
<td>4</td>
<td>$187,719.29</td>
<td>MARTA Track Time</td>
</tr>
<tr>
<td>5</td>
<td>$15,015.92</td>
<td>Gilmer Street Void Repair</td>
</tr>
</tbody>
</table>

18. DBE

a. What was the project’s DBE goal? 4%

b. Was it or will it be met? ☒ Yes ☐ No

If yes, generally describe utilization:
  o Multiple disciplines construction and design phase.

19. Summary of observations from Office of Innovative Delivery (OID), Construction, DB Team

  o First GDOT Design-Build project where LowBid price was not awarded the project, due mostly to 50% technical score. 50% technical score directly contributed to the success of the project. Contractor intentionally chose to 1) prioritize the schedule by looking for ways to reduce the construction period and 2) put a premium on increased public outreach and stakeholder involvement. Unsolicited stakeholder letter of endorsement speaks highly to contractor’s dedication to this element of the project.

  o Both DB Team and GDOT noted the importance of having shared vision to achieve the common goal of delivering a quality project in an expedited manner. Contract expectations/durations were clearly stipulated, but still allowed DB Teams appropriate flexibility.

  o Contractor noted that level of public/media outreach expected from contractor was unclear in contract, and full potential was not realized.

  o Designer noted the extremely reduced design timeframe from September 2017 to May 2018 to complete all bridge design, and appreciated the contractor’s approach to delivery with increased DOT
collaboration. Although co-location was not used on the project, the increased DB Team & GDOT collaboration was paramount to the success of the project.

20. **Recommendations**
   - Contractor noted that RFI & NCR process was clear in contract and DB Manual but roles/responsibilities in PMCS could be better documented, including role of EOR in the process. GDOT to review RFI & NCR processes on future DB projects.
   - City of Atlanta noted the high level of success for this project, and recommended further COA bridges be delivered using a similar approach.

21. **Notable achievements by early interaction of design and contractor**
   - Contractor noted that early interaction allowed DB Team to pursue multiple options to deliver the project – regarding different delivery timeframes. Contractor noted that Liquidated Damages need to be sufficient enough to drive GDOT’s goals for the project, but not so high they hinder DB Team flexibility.
22. Post Design-Build Evaluation participants:
# D-B Post Construction Evaluation Sign-in Sheet

**Project:** BRMLB-9007-00(014), Fulton County; P.I. No. 752015-; CS 1868/Courtland St at CSX RR/MARTA/Decatur St  
**Meeting Date:** December 4, 2018  
**Location:** Engineering Services Conference Room, 5th Floor, One Georgia Center

<table>
<thead>
<tr>
<th>Name</th>
<th>Office/Company</th>
<th>Phone</th>
<th>e-mail address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chuck Hasty</td>
<td>GDOT - Eng. Srvcs.</td>
<td>404.631.1717</td>
<td><a href="mailto:chastya@dot.ga.gov">chastya@dot.ga.gov</a></td>
</tr>
<tr>
<td>Ibrahim Abousaud</td>
<td>COA</td>
<td>404-330-6653</td>
<td><a href="mailto:ialabousaud@atlanta.ga.gov">ialabousaud@atlanta.ga.gov</a></td>
</tr>
<tr>
<td>Al Bowman</td>
<td>MICHAEL BAKER INTL</td>
<td>678-642-6455</td>
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<td>Doug Franks</td>
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<td>Andrew Henig</td>
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<td>Richard O'Hara</td>
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<td>404-631-1169</td>
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<tr>
<td>Michael Ayo</td>
<td>COA-DPW</td>
<td>404-330-6467</td>
<td><a href="mailto:mayo@atlanta.ga.gov">mayo@atlanta.ga.gov</a></td>
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<tr>
<td>Mike Nadaski</td>
<td>CWM</td>
<td>404-316-9919</td>
<td>mnadaski@<a href="mailto:cwm@theus.com">cwm@theus.com</a></td>
</tr>
<tr>
<td>Lisa Woods</td>
<td>HNTA</td>
<td>404-3045-9446</td>
<td><a href="mailto:lswoods@hnta.com">lswoods@hnta.com</a></td>
</tr>
<tr>
<td>Bob Thompson</td>
<td>CWM</td>
<td>(770) 596-9444</td>
<td><a href="mailto:bbt@cwmatthews.com">bbt@cwmatthews.com</a></td>
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